

IN THE CLAIMS:

1. (Currently amended) An underground sprinkler with a pop-up head, consisting of a corresponding underground casing, and an upper cylindrical part having a first diameter and a lower cylindrical part having a second diameter, it has two differentiated cylindrical parts, closed by a corresponding cover fixed to the pop-up sprinkler head, which, being a part coupled to the a piston, and pops-up due to the effect of the water pressure pushing said piston and displaced proportionally to the water pressure in a portion calculated for said purpose and which is so maintained for as long as said pressure lasts, to be recovered by the action of a permanent draw-spring when the when the water pressure stops, and having respective filtering means, piston guiding and holding means, spray arc and sprinkler head swing control means and means for assembling the sprinkler head, characterized in that it comprises, comprising:

in the intersection (232) of the two bodies (230-231) of the casing (23), a draining and cleaning means for preventing the jamming of the sprinkler mechanisms (4) disposed in an intersection of two bodies (230, 231) of the casing (23);

a special cover-nut (25) for adjusting at a quarter turn against said intersection (232) which is assembled and disassembled with a special tool and which serves as assembly to and assembled onto the piston (16) having a smooth tubular cylindrical body, which is a specially smooth, tubular cylindrical body which, on the lower end, has and having a fitting means for fitting a respective inlet filter (22) on a lower end thereof;

a closure and anti particle or impurity return filter (22);  
an upper end of said piston with control means for controlling ~~respective~~  
Reference omega-shaped elements (17-173) for the spray arc;  
a stop (29) for the catch of the lower body (12) of the sprinkler (4);  
a non-detachable stainless steel shaft (3) for ~~assembly of assembling~~ the  
lower (12) and upper (11) body of the sprinkler (4);  
a jet breaker element (10); a single-piece, plastic, reinforced diffuser blade (7)  
without counterweights.

2. (Currently amended) An underground sprinkler with a pop-up head  
according to claim 1, wherein the draining and cleaning means are characterized in  
~~that they are openings (233, 234 and 235) provided on a the beveled surface of the~~  
intersection (232) of both bodies (230, 231) of the casing (23), ~~preferably and~~  
arranged at 120°.

3. (Currently amended) An underground sprinkler with a pop-up head  
according to claim 1, wherein the special cover-nut quarter turn fit is characterized in  
that it is a part (25) having a cylindrical body (250) of circular plan provided with a  
superficial rib (251) with bevels (252, 253) on two sides for the application of a  
special tool for opening and closing, and provided with projecting arcuate wedge-  
shaped teeth (254) on the perimetral edge and with a slight stepping (256) with the  
bases for said quarter turn embedding in at least three points at 120°, and it is  
provided with a central passage (255) for the piston (16), and a circumscribed

circular housing (259) on the inside for storing a joint (26) having a profile suitable for fitting to said piston (16), and another doughnut-shaped housing (258) for a joint for fitting to the corresponding body (230).

4. (Currently amended) An underground sprinkler with a pop-up head according to claim 1, wherein the piston is characterized in that it further comprises an externally smooth, tubular cylindrical body (16) which, ~~on the lower end~~, has a having a widened and internally conditioned part (160) with a concave curve seating (162) for adapting the major base (222) of the purifying filter (22) and, ~~on the upper end~~, it has a smaller diameter neck (165) on an upper end thereof and provided with several external vertical grooves or ribs (167) for the corresponding adaptation of the omega-shaped elements (17-173) controlling the spray arc.

5. (Currently amended) An underground sprinkler with a pop-up head according to claim 4, wherein the vertical grooves or ribs are characterized in that they are grooves or ribs (167) with an acute triangle profile and they are equidistantly distributed, preferably at a 60° spacing.

6. (Currently amended) An underground sprinkler with a pop-up head according to claim 4, wherein the purifying filter for the water inlet is characterized in that it further comprises a frusto-conical body (22) inverted according to its assembly position, having a closed minor base (220) and another upper, open major base (222) with a perimetral flap (223) for pressure fitting in the lower conditioned part

(162) of the piston (16).

7. (Currently amended) An underground sprinkler with a pop-up head according to claim 6, wherein the minor base of the filter is characterized in that it has further comprises a concentric outer rim (221) which is housed and closed in an inner stepped (238) neck (237) of the inlet (236) or intake of the lower body (230) of the casing (23).

8. (Currently amended) An underground sprinkler with a pop-up head according to claim 5, wherein the omega-shaped elements controlling the spray arc are characterized in that they further comprise an annular body (17) projected in two divergent branches (171-172) justifying said omega shape, and which internally, on the annular body (17), have a triangular toothing (170) preferably at 114°, which rotate in a single direction or only clockwise in said grooves or ribs (167) of the upper neck (165) of the piston (16).

9. (Currently amended) An underground sprinkler with a pop-up head according to claim 8, wherein the stop for said omega-shaped elements is characterized in that it comprises further comprise a stainless steel wire part (29) in the form of an elongated trapezium having a central opening (290) on the major base, producing two anchors (291-292) which are fixed in a corresponding housing (120) of the lower sector (12) of the sprinkler (4).

10. (Currently amended) An underground sprinkler with a pop-up head according to claim 1, wherein the stainless steel shaft for assembling the sprinkler body is characterized in that the upper end of said shaft (3), according to its assembly, further comprises a milled space (30) where the head (113) of the sprinkler (4) is non-detachably fixed.

11. (Currently amended) An underground sprinkler with a pop-up head according to claim 1, wherein the jet breaker is characterized in that it further comprises a controlling screw (10) incorporating a damping spring (101) and which screws into a biased hole (115) provided on a side extension (116) of the upper sector (11) of the sprinkler (4), directly facing the outlet (110) of the spray nozzle (9).

12. (Currently amended) An underground sprinkler with a pop-up head according to claim 1, wherein the jet diffusing blade, provided in a single, plastic part, is characterized in that it further comprises a wide open fork-shaped arm (7) with irregular prismatic rolls on its ends (70-71), without counterweights, and with longitudinal reinforcement ribs (73-74) on both sides of the arm (7).